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FILE 'HOME' ENTERED AT 14:41:52 ON 14 APR 2003

=> fil reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES: 13 APR 2003 HIGHEST RN 502841-39-6 DICTIONARY FILE UPDATES: 13 APR 2003 HIGHEST RN 502841-39-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

Uploading 09866926.str

L1 STRUCTURE UPLOADED

=> Uploading 098669261.str

L2 STRUCTURE UPLOADED

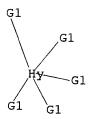
=> d 11

L1 HAS NO ANSWERS

L1

STR





G1 H, X, Ak, [@1]

Structure attributes must be viewed using STN Express query preparation.

=> d 12

L2 HAS NO ANSWERS

L2 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 and 12

SAMPLE SEARCH INITIATED 14:42:44 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 3096 TO ITERATE

32.3% PROCESSED 1000 ITERATIONS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS:

58584 TO 65256

PROJECTED ANSWERS:

286 TO 952

10 SEA SSS SAM L1 AND L2

=> s 11 and 12 ful

FULL SEARCH INITIATED 14:42:49 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 60714 TO ITERATE

100.0% PROCESSED 60714 ITERATIONS

SEARCH TIME: 00.00.01

667 ANSWERS

10 ANSWERS

=> s l4 and caplus/lc 27419509 CAPLUS/LC L5 639 L4 AND CAPLUS/LC

=> d 14 1-5

```
CRN 468081-92-7
CMF C10 H12 N3
 *** FRAGMENT DIAGRAM IS INCOMPLETE ***
          CM 2
          CRN 16919-18-9
CMF F6 P
CCI CCS
                               1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)
L4 ANSWER 3 OF 667 REGISTRY COPYRIGHT 2003 ACS
RN 501693-64-7 REGISTRY
CN Phosphate(1-), hexafluoro-, hydrogen, compd. with
1-ethyl-2-methyl-1H-
imidazole (1:1) (9CI) (CA INDEX NAME)

MF C6 H10 N2 . F6 P . H

SR CA
LC STN Files: CA, CAPLUS
           CM 1
           CRN 21202-52-8
CMF C6 H10 N2
           CM 2
           CRN 16940-81-1 (16919-18-9)
CMF F6 P . H
CCI CCS
      ● H<sup>+</sup>
                               1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)
```

L4 ANSWER 1 OF 667 REGISTRY COPYRIGHT 2003 ACS RN 501926-28-9 REGISTRY CN 1H-Indidazolium, 1-methyl-3-(2-pyridinylmethyl)-, hexafluorophosphate(1-) (9C1) (CA INDEX NAME) (FC 10 H12 N3 . F6 P SR CA LC STN Files: CA, CAPLUS

CH 1

```
CM 1
        CRN 39269-64-2
CMF C12 H14 N2
        CRN 16940-81-1 (16919-18-9)
CMF F6 P . H
CCI CCS
                        1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)
      ANSWER 4 OF 667 REGISTRY COPYRIGHT 2003 ACS 501693-52-3 REGISTRY Phosphate(1-), hexafluoro-, hydrogen, compd. with 1,2-dimethyl-lh-imidazole (1:1) (9CI) (CA INDEX NAME) C5 H8 N2 . F6 P . H
      CA
STN Files: CA, CAPLUS
        CM 1
        CRN 16940-81-1 (16919-18-9)
CMF F6 P . H
CCI CCS
        CM 2
        CRN 1739-84-0
CMF C5 H8 N2
                        1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)
```

1 REFERENCES IN FILE CA (1962 TO DATE) 1 REFERENCES IN FILE CAPLUS (1962 TO DATE) => fil caplus
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 161.97 162.18

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FILE COVERS 1907 - 14 Apr 2003 VOL 138 ISS 16 FILE LAST UPDATED: 13 Apr 2003 (20030413/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s py<2001

SYSTEM LIMITS EXCEEDED - SEARCH ENDED

The search profile you entered was too complex or gave too many answers. Simplify or subdivide the query and try again. If you have exceeded the answer limit, enter DELETE HISTORY at an arrow prompt (=>) to remove all previous answers sets and begin at L1. Use the SAVE command to store any important profiles or answer sets before using DELETE HISTORY.

=> s py<2001 and 14 20609553 PY<2001 681 L4

L6 351 PY<2001 AND L4

=> s 16 and phosphate?
 522310 PHOSPHATE?

L7 13 L6 AND PHOSPHATE?

=> s 17 and ep1162204/pn

1 EP1162204/PN

L8 0 L7 AND EP1162204/PN

=> s 16 and ep1162204/pn

1 EP1162204/PN

L9 0 L6 AND EP1162204/PN

=> s 14

L10 681 L4

=> s 14 and ep1162204/pn

681 L4

1 EP1162204/PN

L11 1 L4 AND EP1162204/PN

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY 11.53

SESSION 173.71

FULL ESTIMATED COST

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=>

Uploading 098772592.str

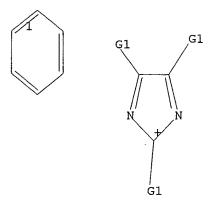
L12 STRUCTURE UPLOADED

=> d

L12 HAS NO ANSWERS

L12

STR



G1 H, X, Ak, [@1]

Structure attributes must be viewed using STN Express query preparation.

0 ANSWERS

=> s 112 ful FULL SEARCH INITIATED 14:49:06 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - >1,000,000 TO ITERATE <-----User Break----->

< 12.4% PROCESSED 161315 ITERATIONS

P

SEARCH ENDED BY USER SEARCH TIME: 00.00.05

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**

BATCH **INCOMPLETE**

PROJECTED ITERATIONS:

EXCEEDS 1000000

PROJECTED ANSWERS:

EXCEEDS 0

L13

0 SEA SSS FUL L12

=> d his

(FILE 'HOME' ENTERED AT 14:41:52 ON 14 APR 2003)

FILE 'REGISTRY' ENTERED AT 14:41:59 ON 14 APR 2003

L1 STRUCTURE UPLOADED

L2 STRUCTURE UPLOADED

L3 10 S L1 AND L2

L4 667 S L1 AND L2 FUL

L5 639 S L4 AND CAPLUS/LC

FILE 'CAPLUS' ENTERED AT 14:44:23 ON 14 APR 2003

L6 351 S PY<2001 AND L4

L7 13 S L6 AND PHOSPHATE?

L8 0 S L7 AND EP1162204/PN

L9 0 S L6 AND EP1162204/PN

L10 681 S L4

L11 1 S L4 AND EP1162204/PN

FILE 'REGISTRY' ENTERED AT 14:48:50 ON 14 APR 2003

L12 STRUCTURE UPLOADED

L13 0 S L12 FUL

=> s 112 and 12 ful

FULL SEARCH INITIATED 14:49:24 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2292 TO ITERATE

100.0% PROCESSED 2292 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L14 0 SEA SSS FUL L12 AND L2

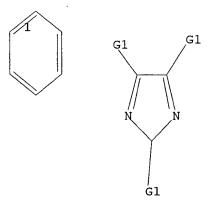
=>

Uploading 098772592.str

L15 STRUCTURE UPLOADED

=> d

L15 HAS NO ANSWERS L15 ST



G1 H, X, Ak, [@1]

Structure attributes must be viewed using STN Express query preparation.

=> s 115 and 12 ful

FULL SEARCH INITIATED 14:50:07 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2292 TO ITERATE

100.0% PROCESSED 2292 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

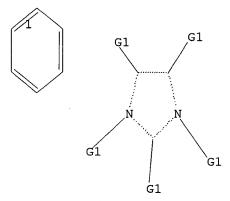
L16 0 SEA SSS FUL L15 AND L2

=>

Uploading 098772592.str

L17 STRUCTURE UPLOADED

=> d L17 HAS NO ANSWERS L17 STR



G1 H, X, Ak, [@1]

Structure attributes must be viewed using STN Express query preparation.

=> s 117 ful FULL SEARCH INITIATED 14:51:14 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - >1,000,000 TO ITERATE <---->

9.3% PROCESSED 120778 ITERATIONS SEARCH ENDED BY USER

22150 ANSWERS

SEARCH TIME: 00.00.03

FULL FILE PROJECTIONS: ONLINE **INCOMPLETE**

INCOMPLETE BATCH

PROJECTED ITERATIONS:

EXCEEDS 1000000

PROJECTED ANSWERS:

EXCEEDS 236894

L18

22150 SEA SSS FUL L17

Uploading 098669261.str

L19 STRUCTURE UPLOADED

=> d

L19 HAS NO ANSWERS

F

Structure attributes must be viewed using STN Express query preparation.

=> s 119 and 117

SAMPLE SEARCH INITIATED 14:51:56 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 119 TO ITERATE

100.0% PROCESSED 119 ITERATIONS

16 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: PROJECTED ANSWERS:

1726 TO 3034 80 TO 560

L20 16 SEA SSS SAM L19 AND L17

=> s 119 and 117 ful

FULL SEARCH INITIATED 14:52:05 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2292 TO ITERATE

100.0% PROCESSED 2292 ITERATIONS

198 ANSWERS

SEARCH TIME: 00.00.01

L21 198 SEA SSS FUL L19 AND L17

=> s 121 and caplus/lc

27419509 CAPLUS/LC

L22 196 L21 AND CAPLUS/LC

=> s 122 not 121

L23 0 L22 NOT L21

=> s 121 not 122

L24 2 L21 NOT L22

=> d 1-2

CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS

=> fil caplus COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 749.53 923.24

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=> d his

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```
FILE 'REGISTRY' ENTERED AT 14:41:59 ON 14 APR 2003
L1
                STRUCTURE UPLOADED
L2
                STRUCTURE UPLOADED
L3
             10 S L1 AND L2
            667 S L1 AND L2 FUL
L4
L5
            639 S L4 AND CAPLUS/LC
     FILE 'CAPLUS' ENTERED AT 14:44:23 ON 14 APR 2003
L6
            351 S PY<2001 AND L4
             13 S L6 AND PHOSPHATE?
L7
rac{1}{8}
              0 S L7 AND EP1162204/PN
L9
              0 S L6 AND EP1162204/PN
L10
            681 S L4
L11
              1 S L4 AND EP1162204/PN
     FILE 'REGISTRY' ENTERED AT 14:48:50 ON 14 APR 2003
L12
               STRUCTURE UPLOADED
             0 S L12 FUL
L13
L14
             0 S L12 AND L2 FUL
L15
              STRUCTURE UPLOADED
L16
            0 S L15 AND L2 FUL
L17
              STRUCTURE UPLOADED
```

| L18 | 22150 | S | L17 | FUL | |
|-----|-------|---|-------|------|-----------|
| L19 | | S | rruc' | TURE | UPLOADED |
| L20 | 16 | S | L19 | AND | L17 |
| L21 | 198 | S | L19 | AND | L17 FUL |
| L22 | 196 | S | L21 | AND | CAPLUS/LC |
| L23 | 0 | S | L22 | TON | L21 |
| L24 | 2 | S | L21 | TON | L22 |

FILE 'CAPLUS' ENTERED AT 14:53:23 ON 14 APR 2003

=> s 121

L25 444 L21

=> s 125 and ep1162204/pn 1 EP1162204/PN

L26 1 L25 AND EP1162204/PN

=> s py<2002 and 125 21530317 PY<2002

L27 253 PY<2002 AND L25

=> s 127 and ep1162204/pn 1 EP1162204/PN

L28 1 L27 AND EP1162204/PN

=> s 127 not ep1162204/pn 1 EP1162204/PN

L29 252 L27 NOT EP1162204/PN

=> fil reg

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 9.39 932.63

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TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

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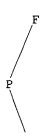
Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties

in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> Uploading 098669261.str

L30 STRUCTURE UPLOADED

=> d L30 HAS NO ANSWERS L30 STR



Structure attributes must be viewed using STN Express query preparation.

=> fil caplus COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.40 933.03

FULL ESTIMATED COST

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| T 1 | FILE | 'REGISTRY' ENTERED AT 14:41:59 ON 14 APR 20 | 3 |
|------------------|-------|---|----|
| L1 L2 | | STRUCTURE UPLOADED STRUCTURE UPLOADED | |
| ь2 ь 3 | | 10 S L1 AND L2 | |
| L3 | | 667 S L1 AND L2 FUL | |
| L5 | | 639 S L4 AND CAPLUS/LC | |
| гэ | | 639 S L4 AND CAPLOS/LC | |
| | FILE | 'CAPLUS' ENTERED AT 14:44:23 ON 14 APR 2003 | |
| L6 | | 351 S PY<2001 AND L4 | |
| L7 | | 13 S L6 AND PHOSPHATE? | |
| L8 | | 0 S L7 AND EP1162204/PN | |
| L9 | | 0 S L6 AND EP1162204/PN | |
| L10 | | 681 S L4 | |
| L11 | | 1 S L4 AND EP1162204/PN | |
| | FILE | 'REGISTRY' ENTERED AT 14:48:50 ON 14 APR 20 | 03 |
| L12 | | STRUCTURE UPLOADED | |
| L13 | | 0 S L12 FUL | |
| L14 | | 0 S L12 AND L2 FUL | |
| L15 | | STRUCTURE UPLOADED | |
| L16 | | 0 S L15 AND L2 FUL | |
| L17 | | STRUCTURE UPLOADED | |
| L18 | | 22150 S L17 FUL | |
| L19 | | STRUCTURE UPLOADED | |
| L20 | | 16 S L19 AND L17 | |
| L21 | | 198 S L19 AND L17 FUL | |
| L22 | | 196 S L21 AND CAPLUS/LC | |
| L23 | | 0 S L22 NOT L21 | |
| L24 | | 2 S L21 NOT L22 | |
| | ם זדם | 'CAPLUS' ENTERED AT 14:53:23 ON 14 APR 2003 | |
| L25 | LILE | 444 S L21 | |
| L25 | | 1 S L25 AND EP1162204/PN | |
| L27 | | 253 S PY<2002 AND L25 | |
| | | | |
| L28 | | 1 S L27 AND EP1162204/PN | |
| L29 | | 252 S L27 NOT EP1162204/PN | |
| | FILE | 'REGISTRY' ENTERED AT 14:56:45 ON 14 APR 20 | 03 |
| L30 | | STRUCTURE UPLOADED | |

FILE 'CAPLUS' ENTERED AT 14:56:57 ON 14 APR 2003

=> s 130 and 129

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:57:08 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 955 TO ITERATE

955 ITERATIONS 100.0% PROCESSED

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS:

17247 TO 20953

PROJECTED ANSWERS:

1812 TO 3148

L31 50 SEA SSS SAM L30

L32 49 L31

L33 0 L32 AND L29

=> s 130 ful and 129

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:57:17 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 955 TO ITERATE

100.0% PROCESSED 955 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS:

17247 TO 20953 1812 TO 3148 PROJECTED ANSWERS:

50 SEA SSS SAM L30 L34

L35 49 L34

MISSING OPERATOR L35 FUL

The search profile that was entered contains terms or nested terms that are not separated by a logical operator. 50 ANSWERS

50 ANSWERS

=> fil reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.42 935.09

FULL ESTIMATED COST

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=> d his

L12

(FILE 'HOME' ENTERED AT 14:41:52 ON 14 APR 2003)

FILE 'REGISTRY' ENTERED AT 14:41:59 ON 14 APR 2003

L1 STRUCTURE UPLOADED

L2 STRUCTURE UPLOADED

L3 10 S L1 AND L2

L4 667 S L1 AND L2 FUL

L5 639 S L4 AND CAPLUS/LC

FILE 'CAPLUS' ENTERED AT 14:44:23 ON 14 APR 2003

FILE 'REGISTRY' ENTERED AT 14:48:50 ON 14 APR 2003 STRUCTURE UPLOADED 0 S L12 FUL

L13 0 S L12 FUL
L14 0 S L12 AND L2 FUL
L15 STRUCTURE UPLOADED
L16 0 S L15 AND L2 FUL
L17 STRUCTURE UPLOADED

| L18 | | | | |
|---|----------------------------------|--|--|--|
| FILE 'CAPLUS' ENTERED AT 14:53:23 ON 14 APR 20 L25 | | | | |
| FILE 'REGISTRY' ENTERED AT 14:56:45 ON 14 APR L30 STRUCTURE UPLOADED | 2003 | | | |
| FILE 'CAPLUS' ENTERED AT 14:56:57 ON 14 APR 20 S L30 AND L29 | 003 | | | |
| FILE 'REGISTRY' ENTERED AT 14:57:08 ON 14 APR L31 50 S L30 | 2003 | | | |
| FILE 'CAPLUS' ENTERED AT 14:57:09 ON 14 APR 20 L32 | 003 | | | |
| FILE 'REGISTRY' ENTERED AT 14:57:17 ON 14 APR L34 50 S L30 | 2003 | | | |
| FILE 'CAPLUS' ENTERED AT 14:57:18 ON 14 APR 20 L35 49 S L34 | 003 | | | |
| FILE 'REGISTRY' ENTERED AT 14:57:29 ON 14 APR | 2003 | | | |
| => s 130 and 117 ful FULL SEARCH INITIATED 14:57:57 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 104 TO ITERATE | | | | |
| 100.0% PROCESSED 104 ITERATIONS SEARCH TIME: 00.00.01 | 3 ANSWERS | | | |
| L36 3 SEA SSS FUL L30 AND L17 | | | | |
| => fil caplus COST IN U.S. DOLLARS S: | INCE FILE TOTAL ENTRY SESSION | | | |
| FULL ESTIMATED COST | 148.15 1083.24 | | | |
| FILE 'CAPLUS' ENTERED AT 14:58:07 ON 14 APR 2003 | CDEDATA | | | |

FILE 'CAPLUS' ENTERED AT 14:58:07 ON 14 APR 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 14 Apr 2003 VOL 138 ISS 16 FILE LAST UPDATED: 13 Apr 2003 (20030413/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 136 L37 1 L36

=> d ibib abs hitstr

```
COPYRIGHT 2003 ACS
2001:900135 CAPLUS
136:20157
Ionic liquids
Schmidt, Michael, Heider, Udo; Geis:
Ignatyev, Nikolai; Hilarius, Volker
Merck Patent G.m.b.H., Germany
Eur. Pat. Appl., 19 pp.
CODEN: EPXEUV
DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

PATENT NO. KIND DATE
EP 116:2204 Al
R: AT, BE, C.
PT,

DE 100
                                                                                                                                                                                                                   Ionic liquids
Schmidt, Michael: Heider, Udo: Geissler,
                                                                                                                                                    NO. KIND DATE APPLICATION NO. DATE

2204 A1 20011212 EP 2001-111953 20016521
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
                                                                                    R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO

DE 10027995 Al 20011213 DE 2000-10027995 20000609

CN 1327986 A 20011226 CN 2001-122805 20010608

JP 2002025610 A2 20020125 JP 2001-173307 20010608

BR 2001002318 A 20020213 BR 2001-2318 20010608

US 2002015884 Al 20020213 US 2001-877259 20010601

PRIORITY AFFIN. INFO: DE 2000-10027995 A 20000609

AB The prepn. of title compds. is described. Thus, reaction of 1-ethyl-3-methylimidazolium chloride with Li[PF3(C2F5)3] gave title compd., 1-ethyl-3-methylimidazolium theride at 1377739-43-0P 377739-45-2P 377739-47-4P

RL: SFN (Synthetic preparation); PREP (Preparation)

(prepn. as ionic liqs.)

RN 377739-43-0 CAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-,
(OC-6-21)-trifluorotris(pentafluoroethy)

1) phosphate(1-) (9CI) (CA INDEX NAME)
                                                                                                                 CM 1
                                                                                                               CRN 123199-69-9
CMF C6 F18 P
CCI CCS
```

L37 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS CRN 123199-69-9 CHF C6 F18 P CCI CCS (Continued)

RN 377739-47-4 CAPLUS CN 1H-Imidazolium, 1-ethyl-3-methyl-, (OC-6-21)-trifluorotris(nonafluorobutyl)phosphate(1-) (9CI) (CA INDEX NAME)

CH 1

CRN 377739-46-3 CMF C12 F30 P CCI CCS

CH 2

CRN 65039-03-4 CMF C6 H11 N2

L37 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS (Continued)

CM. 2

CRN 65039-03-4 CMF C6 H11 N2



*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 377739-45-2 CAPLUS
CN IH-Imidazolium, 1,2-dimethyl-3-propyl-, (OC-6-21)trifluorotris(pentafluoroethyl)phosphate(1-) (9CI) (CA INDEX NAME)

CRN 157310-70-8 CMF C8 H15 N2

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CDM 2

L37 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS (Continued)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

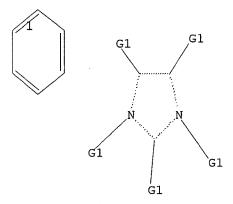
FORMAT

=> d 130 L30 HAS NO ANSWERS L30 STF



Structure attributes must be viewed using STN Express query preparation.

=> d 117 L17 HAS NO ANSWERS L17 STR



G1 H, X, Ak, [@1]

Structure attributes must be viewed using STN Express query preparation.

| => fil reg | | |
|--|------------|---------|
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 5.37 | 1088.61 |
| | | |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | -0.65 | -0.65 |

FILE 'REGISTRY' ENTERED AT 14:59:09 ON 14 APR 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 13 APR 2003 HIGHEST RN 502841-39-6 DICTIONARY FILE UPDATES: 13 APR 2003 HIGHEST RN 502841-39-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s 136 and caplus/lc 27419509 CAPLUS/LC L38 3 L36 AND CAPLUS/LC

=>

=>

. ---Logging off of STN---

Executing the logoff script...

=> LOG Y

| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
|--|------------|---------|
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 4.62 | 1093.23 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | 0.00 | -0.65 |

STN INTERNATIONAL LOGOFF AT 14:59:33 ON 14 APR 2003

09/877,259 Page 1

ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS ACCESSION NUMBER: 2001:900135 CAPLUS

DOCUMENT NUMBER:

136:20157

TITLE:

Ionic liquids Schmidt, Michael; Heider, Udo; Geissler, Winfried;

Ignatyev, Nikolai; Hilarius, Volker

PATENT ASSIGNEE(S):

Merck Patent G.m.b.H., Germany

SOURCE:

INVENTOR(S):

Eur. Pat. Appl., 19 pp. CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT | r NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|-------------|---------|----------|------------------------|-------------------|
| | - - | | | | |
| EP 116 | 52204 | A1 | 20011212 | EP 2001-111953 | 20010521 |
| R | AT, BE, | CH, DE, | DK, ES, | FR, GB, GR, IT, LI, LU | , NL, SE, MC, PT, |
| | IE, SI, | LT, LV, | FI, RO | | |
| DE 100 | 27995 | A1 | 20011213 | DE 2000-10027995 | 20000609 < |
| CN 132 | 27986 | A | 20011226 | CN 2001-122805 | 20010608 |
| JP 200 | 2025610 | A2 | 20020125 | JP 2001-173307 | 20010608 |
| BR 200 | 1002318 | A | 20020213 | BR 2001-2318 | 20010608 |
| US 200 | 2015884 | A1 | 20020207 | US 2001-877259 | 20010611 |
| PRIORITY A | PPLN. INFO | .: | | DE 2000-10027995 A | 20000609 |
| AB The prepn. of title compds. is described. Thus, reaction of | | | | | |
| 1-ethyl-3-methylimidazolium chloride with Li[PF3(C2F5)3] qave title | | | | | |
| compd., 1-ethyl-3-methylimidazolium tris(pentafluoroethyl)trifluorophospha | | | | | |
| te. | _ | _ | | _ | |

REFERENCE COUNT:

2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L11 ANSWER 29 OF 82 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER:

1998:677114 CAPLUS

DOCUMENT NUMBER:

130:29457

TITLE:

Thermal properties of imidazolium ionic liquid

electrolytes

AUTHOR(S):

McEwen, Alan B.; Ngo, Helen L.; LeCompte, Karen

Covalent Associates, Inc., Woburn, MA, USA CORPORATE SOURCE:

SOURCE:

Proceedings of the Conference of the North American Thermal Analysis Society, 26th, Cleveland, Sept.

13-15, 1998 (1998), 21-26. Editor(s):

Williams, Kathryn R. Omnipress: Madison, Wis.

CODEN: 66VEAV

DOCUMENT TYPE:

Conference English

LANGUAGE:

The authors investigated the thermal properties of several imidazolium salts using DSC and TGA/SDTA data. Many of these salts are ambient and sub-ambient temp. ionic liqs., which form glasses at low temps. and have minimal vapor pressure up to their thermal decompn. temp. Thermal decompn. is endothermic with the inorg. anions and exothermic with the org. anions investigated. Halide anions drastically reduce the thermal stability of these salts. We have obsd. that aluminum TGA pans catalyze the decompn. of the salts with the inorg. fluoride anions. The imidazolium cation is thermally more stable than the tetraalkyl ammonium cations.

155371-19-0 157310-73-1 216300-12-8 IT

216300-13-9 216300-14-0

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

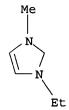
(thermal properties and thermal decompn. of)

155371-19-0 CAPLUS RN

1H-Imidazolium, 1-ethyl-3-methyl-, hexafluorophosphate(1-) (9CI) CN INDEX NAME)

CM 1

CRN 65039-03-4 CMF C6 H11 N2



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 16919-18-9

CMF F6 P CCI CCS

RN 157310-73-1 CAPLUS

CN 1H-Imidazolium, 1,2-dimethyl-3-propyl-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 157310-70-8 CMF C8 H15 N2

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 16919-18-9 CMF F6 P

CCI CCS

RN 216300-12-8 CAPLUS

CN 1H-Imidazolium, 1-methyl-3-propyl-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 80432-06-0 CMF C7 H13 N2

*** FRAGMENT DIAGRAM IS INCOMPLETE ***

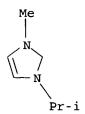
CM 2

CRN 16919-18-9 CMF F6 P CCI CCS

RN 216300-13-9 CAPLUS
CN 1H-Imidazolium, 1-methyl-3-(1-methylethyl)-, hexafluorophosphate(1-) (9CI)
(CA INDEX NAME)

CM 1

CRN 94530-91-3 CMF C7 H13 N2



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 16919-18-9

CMF F6 P

CM 1

CRN 216299-74-0 CMF C8 H15 N2